UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte LINDA N. WINSLOW

Appeal No. 2005-2257
Application No. 10/087,028

ON BRIEF

Before KIMLIN, GARRIS, and TIMM, Administrative Patent Judges.

GARRIS, Administrative Patent Judge.

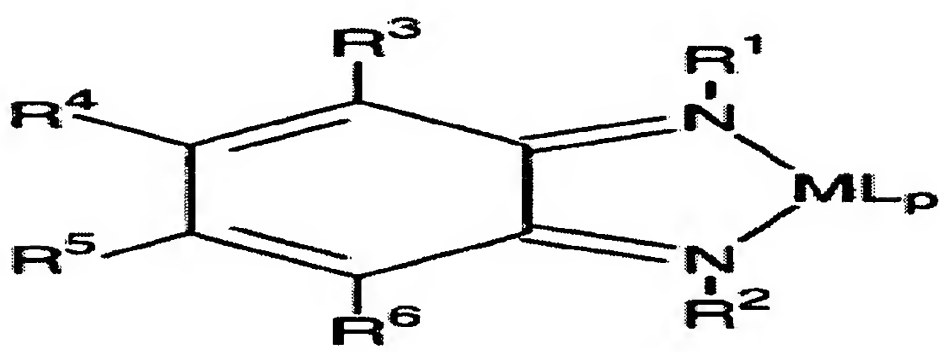
DECISION ON APPEAL

This is a decision on an appeal which involves claims 12-20.

The subject matter on appeal relates to a process for coupling two or more olefins which involves using a catalyst conforming to a particular formula. This appealed subject matter is adequately represented by claim 12, the sole independent claim on appeal, which reads as follows:

12. A process for coupling two or more olefins, the process comprising:

1) introducing into a reaction vessel an activator and a catalyst of formula I:



I

where

M is a metal selected from Groups 3 to 10 of the Periodic Table;

R^1 and R^2 are the same or different and are independently selected from hydrogen, C_{1-10}alkyl, C_{6-10}aryl, or C_{7-15}aralkyl, each of these optionally substituted with halogen, cyano, C_{1-4}alkoxy, C_{1-4}alkyl, and with the proviso that not more than 1 of R^1 or R^2 is a hydrocarbon which is branched at the imino-bonded carbon atom;

R^3, R^4, R^5, and R^6 are independently hydrogen, C_{1-10}alkyl, C_{6-10}aryl, C_{7-15}aralkyl, C_{1-10}alkoxy, or C_{1-10}dialkylamino, each of these optionally substituted with halogen, cyano, C_{1-4}alkoxy, or C_{1-4}alkyl, or wherein any two adjacent R^3 through R^6 form a cyclic structure or are part of a larger ring structure, said cyclic structure and said larger ring structure optionally containing one or more heteroatoms, preferably B, N, O, S, or P;

L is a neutral or charged ligand; and

p is a integer such that complex I is neutral and the valency of M is satisfied; and

2) introducing at least one olefin into the reaction vessel, wherein at least two molecules of olefin are coupled together.

The reference set forth below is relied upon by the examiner in the Section 102 rejection before us:

Hauptman et al. (Hauptman) WO 01/923242 A2 Dec. 6, 2001
(published World Intell. Prop. Org. Patent Application)

All of the appealed claims stand rejected under 35 U.S.C. § 102(a) as being anticipated by Hauptman.

OPINION

Hauptman discloses compounds useful as olefin polymerization catalysts including, for example, the ligands represented by formulae XIV and XV shown on page 30. The undisputed issue in this appeal is whether the R^{26} and R^{27} substituents of these ligands comply with the appealed independent claim 12 definition for catalyst substituents R^1 and R^2 and in particular the proviso that "not more than 1 of R^1 or R^2 is a hydrocarbon which is branched at the imino-bonded carbon atom."

Concerning this issue, the appellant and the examiner both agree that Hauptman defines his R^{26} and R^{27} substituents as being "each independently hydrocarbyl or substituted hydrocarbyl,

provided that the carbon atom bonded to the imino nitrogen atom has at least two carbon atoms bound to it" (lines 4-7 on page 31). It is the appellant's position that the aforequoted proviso results in both R^{26} and R^{27} being a branched hydrocarbon at the imino-bonded carbon atom whereas appealed claim 12 permits only 1 such substituent to be so branched. On the other hand, the examiner argues that Hauptman's proviso "does not necessarily mean that the secondary carbon atom is branched" (answer, page 4). In this regard, the examiner explains that "a phenyl group (as shown in Hauptman, page 88, formula 48) or a cyclohexyl group with six identical secondary carbon atoms is not branched because the bond connectivity of the carbon atoms are all linked in a cyclic fashion destroying any branching" (answer, pages 4-5).

Thus, the pivotal determination in resolving this appeal is whether the cyclic structure of the R^{26} and R^{27} phenyl substituents taught by Hauptman (e.g., see item 48 on page 88) are properly considered a branched structure or not. If the phenyl substituents are considered branched structures as urged by appellant, Hauptman's compounds are excluded by the claim 12 proviso. If not as urged by the examiner, Hauptman's compounds fall within the scope of the appealed claims, thus making the examiner's finding of anticipation correct.

On the record before us, the examiner has proffered no evidence whatsoever to support his position that Hauptman's phenyl substituents should not be considered branched at the imino-bonded carbon atom. In contrast, the appellant not only has challenged the propriety of the examiner's position but has submitted evidence to refute it. This evidence is in the form of a declaration under 37 CFR § 1.132, filed September 20, 2004, by Dr. James W. Proscia. In this declaration, Dr. Proscia explains why an aryl group directly bonded to an imino nitrogen "is clearly branched" and "is clearly understood by one of ordinary skill in the art of organic chemistry as 'branched at the imino carbon'" (declaration, page 2).

Under these circumstances, we are compelled to agree with the appellant that Hauptman's above discussed compounds are excluded from the appealed claims. No other determination is possible where, as here, the only evidence presented to us concerning this matter supports the appellant's position. We hereby reverse, therefore, the examiner's Section 102 rejection of claims 12-20 as being anticipated by Hauptman.

The decision of the examiner is reversed.

REVERSED

EDWARD C. KIMLIN)
Administrative Patent Judge)
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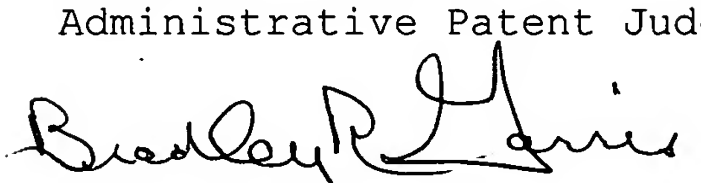
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Administrative Patent Judge) APPEALS AND
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CATHERINE TIMM)
Administrative Patent Judge)

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